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Veterinary Examination and Restraint of Caged Birds

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Today's growing interest in companion and aviary birds presents a challenge to the practitioner to implement rational veterinary care. A complete and cautious physical examination aided by proper restraint is necessary in the diagnosis of cage bird diseases. Clinical examination can be difficult due to the nature of birds and their small size.

It is important to examine a bird as soon as any abnormalities are noted by the owner. Birds show signs of pain and discomfort in less specific and more subtle ways than mammals. Aside from external injuries, early clinical signs may not be very pronounced and can easily be overlooked by the owner or veterinarian. A patient and thoughtful examination to detect early signs of illness by the clinician depends upon his full use of sight, hearing, palpation and even the sense of smell.

Proper instruction to the cage bird owner is important prior to examination. The owner should be advised to bring the bird in its own cage whenever possible. The water cup should be emptied; high perches should be removed if the bird is injured. All foods and supplements fed to the bird as well as any medicine used for home treatments also should be seen. A secure cage cover is also necessary for the bird's protection in transit.

In addition, the birds' recent feces (past 24-48 hours) need evaluation. The amount and characteristics of these droppings are noteworthy indicators of appetite and liquid consumption, and useful in differential diagnosis. The owner can save the cage paper for later examination or cover it with clean paper several hours prior to leaving the home.

In the exam room, it is helpful to prevent distractions and potential hazards while examining the patient. Close all doors and windows, drapes or blinds and turn off any fans. Dim light except over the exam table aids in keeping the bird as calm as possible. After the cage is uncovered, take the patient's history while the bird is settling down. Thoroughly question the owner, noting such things as source of the bird plus its home environment, its past health and present illness.

Initially, carefully observe the bird in its cage. Evaluate its general condition, attitude and posture, including any respiratory distress and other abnormalities. Check its wing carriage and body plumage. Gently distrubing the bird from its perch may reveal lameness or nervous disorders, e.g., ataxia, paresis, etc. Blindness can be diagnosed by slowly moving a hand near the bird and watching its reaction. Blind birds usually respond to the owner's voice.

Next discreetly inspect the cage and its accessories. Check for adequate size and type, cleanliness, and condition of perches, toys, mirrors, bells, etc. Chewed or broken articles could mean possible foreign bodies

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swallowed. Look for the presence of mites or lice in the cage and its cover.

Proper restraint of a companion bird should not result in accidental death of the patient if reasonable care is exercised. However, a severely stressed bird may resist restraint, and the examination should be stopped in extremely critical cases. In most cases the owner shouldn't be asked to catch and hold the bird as many are reluctant and inexperienced in doing so and often end up exciting or injuring the bird.[8]

Before catching the bird, remove perches and other impedimenta from within the cage. The subject should be approached slowly and then caught quickly, quietly, and gently. Small birds (canaries and parakeets) are best held bare-handed. Gloves are clumsy and impair the sensitivity of grasp. The bird should be held with its back cupped in the palm of the hand and the head positioned between the index and middle fingers (Figure 1). An improperly held bird can be suffocated by restriction of its sternal movements (Figure 2). To avoid suffocation, the sternum needs free, full excursion for normal respiration as illustrated in Figure 3.

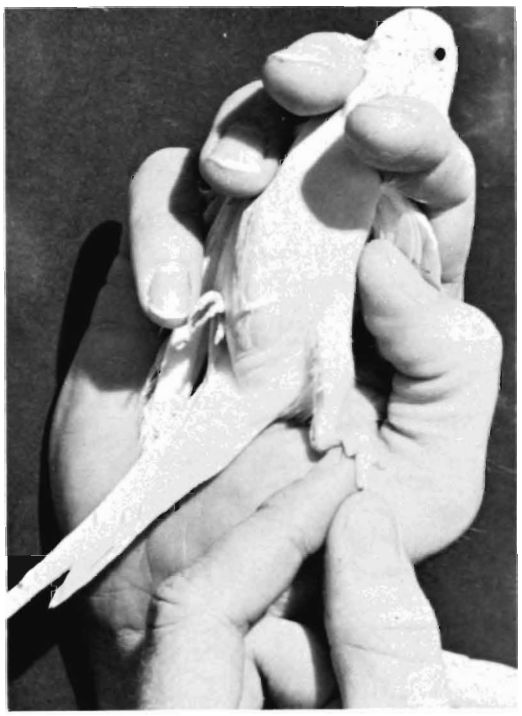

Fig. 1: Proper restraint of a small bird (parakeet).

Fig. 2: An improperly held small bird (parakeet).

Fig. 3: Restraining a parakeet, allowing free sternal movements.

Other variations of restraint include holding a towel around the bird for the examiner's protection and to prevent injury to the bird's feathers, wings and legs.[5] One can also roll the bird in a newspaper or cloth tube or even restrain it within the sleeve of a lab coat—these techniques are useful in handling larger birds.

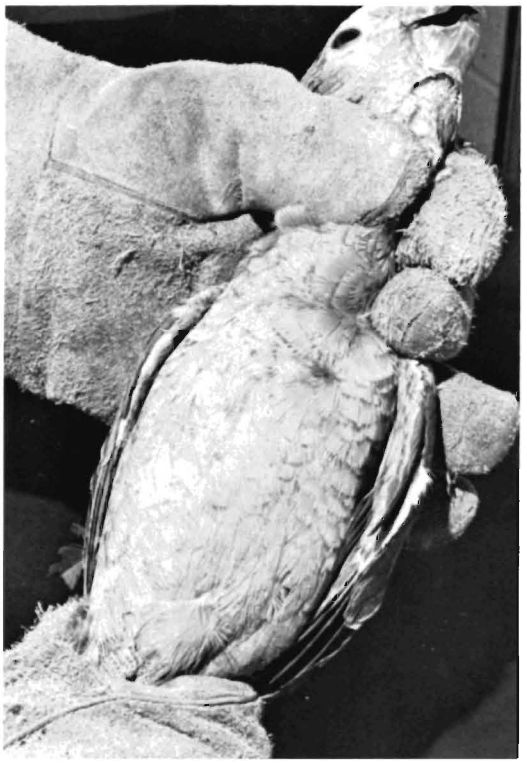

Fig. 4: Proper restraint of a large parrot.

Restraining larger psittacines (parrots) demands skill and caution since they are hazardous with their claws and beak. Heavy work gloves are needed to grasp the head and feet. An assistant is helpful in distracting the bird and covering it with a towel before grasping. Catch the bird against a solid surface, securing the head and neck plus restricting the wings in the palm of one hand. The other hand must firmly but gently hold the feet (Figure 4). A soft durable towel may be used instead of gloves. Again, *never* restrict movement of the sternum.

With the bird in hand, the examination should be rapid but complete. Larger birds take longer to examine and an assistant can help with the restraint. Appropriate instruments for close-up examination include a binocular loupe, a Brown-Adson thumb forceps, a paper clip for use as an oral speculum, and a stethoscope.

Indentity of Bird

Note the color and other markings of the bird. If possible, determine its sex. Depending upon the species, several criteria can be used; however, none are infallible. Check the type of legband (plastic or metal) on the bird. Record its color and number for future indentification purposes.

General Bodily Condition

Palpate the pectoral muscles and note how convex or concave they are (Figure 5). The degree of breast musculature is important. Sufficient musculature in sick birds usually indicates a relatively short illness. In comparison, atrophied musculature generally indicates a more chronic disease. A prominent keel bone indicates muscle atrophy.

If much subcutaneous fat is palpated, differential diagnosis would include obesity or xanthomatosis. Obese parakeets (budgerigars) are common and dyspnea due to fat impingement upon the air sacs is possible. Examine for skin flexibility and note whether the eyes are bright and alert or dull and partly closed.

Fig. 5: Palpating a parrot's breast and leg musculature.

Skeleton

Carefully palpate for abnormal joint and bone conditions in the bird (Figure 6). Check for limb bone fractures and luxations or deviations of the keel.

Fig. 6: Digital palpation of wing joint (elbow) in a parrot.

Plumage and Skin

The veterinarian should pay close attention to the feathers and skin. Feather disorders include alopecia, abnormal or broken feathers, active feather regeneration, and variable amounts of down density. A poor diet can produce a severe feather loss. Mites on the cere, legs, and vent are a common skin problem and are easily detected in skin scrapings. For detection of quill or follicle mites several body feathers may be plucked and examined.

The uropygial or preen gland, located above the base of the tail, is examined along with the bird's back feathers. This oil gland is absent in some psittacines while small in others (Figure 7). Larger birds (e.g. a crow in Figure 8) have a more noticeable uropygial gland. Signs of impaction, neoplasia, or infection should be noted.

Fig. 7: Uropygial gland of a parakeet.

Fig. 8: Uropygial gland of a crow.

Head

Close-up examination is aided with a pair of thumb forceps and a binocular loupe. Ectoparasites and other abnormalities can be revealed by teasing the feathers apart. The nares are observed for exudates or encrustations (Figure 9). Soiled or matted feathers near the nostrils indicate nasal discharge. Listen carefully to the respiratory sounds; a faint sneeze or clicking sound can be signs of respiratory diseases. Swellings around or near the eye suggest conjunctivitis or sinusitis.

Fig. 9: An unhealthy parrot: note nasal discharge and crustations.

The cere is a prominent structure in some birds, especially the budgerigar. Male budgies (the wild type and most dark-eyed mutants) older than 4-6 months have blue

ceres, unlike the females which have light pinkish-tan to brown colored ceres. An occasional abnormality, most often seen in female budgies, is brown hypertrophy, a callus-like thickening of the cere. The cere is also prone to inflammation associated with nasal discharges or injuries, and especially in budgies, Cnemidocoptic mite infestation ("scaley face").

The bird's bill is inspected for tumors, cracks, splits, length and curvature (trimming may be necessary), and malocclusion. Surface pitting of the bill along with crusted nares is usually caused by mange. A pair of small thumb forceps or a paper clip makes an ideal oral speculum for examining small birds, while larger forceps or a small animal speculum is good for larger birds. Examine the tongue for abscesses or tumors and check for stomatitis and pharyngitis.

The auricular openings lack a pinna (Figure 10). Primary diseases of the ear are rare in birds.

Neck and Crop

An empty crop is normally not palpable. Note signs of crop impaction, thickening (e.g. ingluvitis due to *Candida,* Vit. A deficiency, capillariasis and tumors).

Fig. 10: Examination of the auricular openings (parakeet).

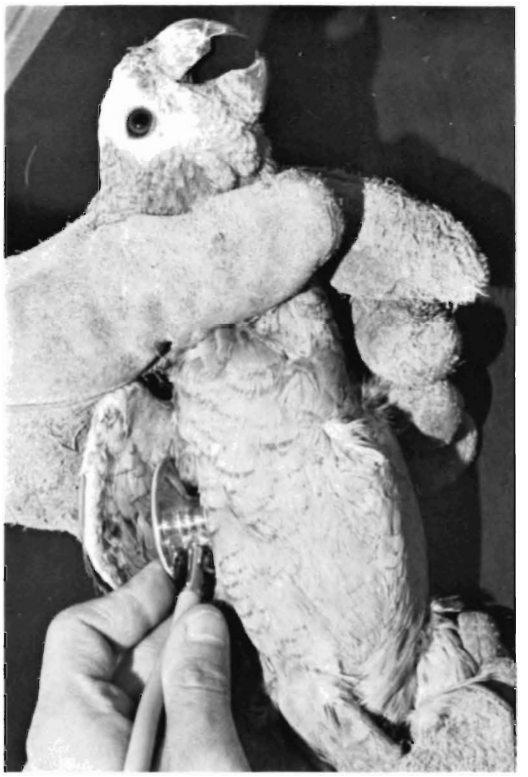

Fig. 11: Ascultation: dorsolateral thorax.

Thorax

Check for presence of tumors. Ascultation of heart and respiratory rates are of limited value, since normal rates can vary considerably. Figure 11 shows the positioning for ascultating dorsally on the vertebral ribs, adjacent to the wing. The heart rate of small birds is very rapid (250-500 beats/min.), while respiratory sounds are difficult to localize except in large birds. Differentiation and localization of respiratory râles is often of questionable accuracy.

Abdomen

Fluctuant swellings suggest possible cysts (oviduct, ovarian) or ascites (cardiac or hepatic diseases). Firm swellings can indicate neoplasia (kidney, gonad, liver), gastric impaction, hepatomegaly or a retained egg. The vent should be examined for a possible prolapse; hernias are usually adjacent to the vent. Ascultation of the abdomen is best performed on the midline just caudal to the sternal margin (Figure 12).

Fig. 12: Ascultation: midline, caudal to sternal margin.

Limbs

The wings are the site of most tumors (commonly connective tissue neoplasms). Investigate joint swellings (gout, arthritis, bumblefoot); check for signs of paresis or paralysis, and palpate the musculature. Edematous regions have a number of etiologies, e.g., cardiac failure, abdominal tumors and hepatic lesions.

Mite lesions ("scaley leg" due to *Cnemidocoptes pilae*) are noticeable on the legs and feet. Trim overgrown or deformed claws, and adjust or remove leg bands if abrasive or too tight. Dietary deficiencies or imbalances can cause paralysis ("curley toe" due to riboflavin deficiency).

Blood Sampling and Parenteral Injections

The breast musculature is a routine site for IM injection of anesthetics (Figure 13). Venipuncture is commonly performed in the right jugular vein (Figure 14). The loose skin of the neck is the preferred site for hypodermoclysis.

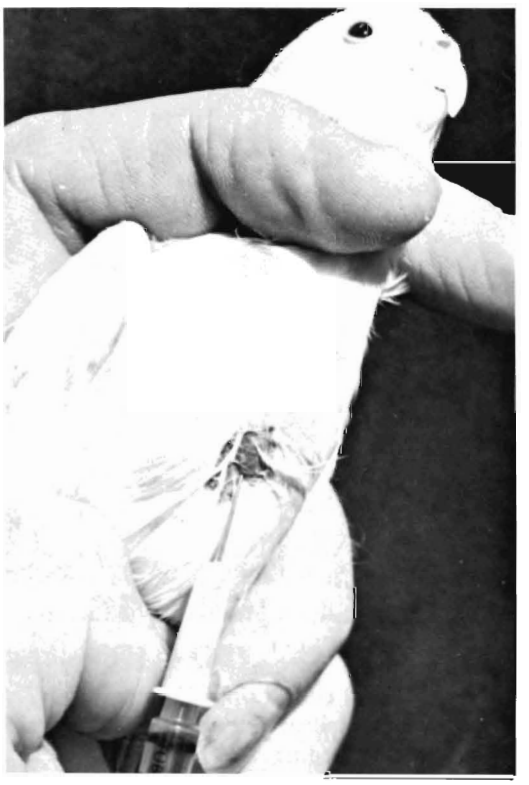

Fig. 13: IM injection into a parakeet's breast muscles.

Blood samples can be taken from the wing vein (Figure 15) or easily obtained by clipping a toenail and collecting blood with a microhematocrit tube. Minimal restraint of

Fig. 14: Blood sample: jugular vein (parakeet).

Fig. 15: Blood sample: wing vein (parakeet).

the leg avoids occlusion of its vasculature during blood collection (Figures 16-17). Cautery with a silver nitrate stick effectively stops the nail bleeding.

Supplemental to the routine physical exam, the veterinarian may rely upon other diagnostic procedures: hematology, skin scrapings, serology, radiology, microbiology, and fecal floatation and culture.

In conclusion, any abnormality observed in a caged bird should be carefully evaluated. The basic principles of clinical veterinary medicine are as applicable to caged birds as to domestic mammals. In order for them to be rationally applied to avian patients a routine for thorough avian physical examination must be established, practiced, and utilized.

Fig. 16: Parakeet leg held for nail clipping.

Fig. 17: Blood sample: microhematocrit tube collection from a bleeding toenail; note leg vasculature not being occluded (parakeet).

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